

## Claims

1. System for combining and representing signals (4, 5) of a hardware simulation device (1) and elements (15) of a listing (2) of a program (3),
- 5     • where the hardware simulation device (1) simulates the behavior of a circuit (6) with a processor (7), a program memory (8) which contains the program code (9) of the program (3), and application-specific hardware components (10), and creates signals (4, 5) as the result of the simulation,
- 10     • with the elements (15) of the listing (2) of the program (3) being combined with the signals (4, 5) created during the simulated execution of the program code (9) contained in the program memory (8) corresponding to these elements
- 15     (15),
- with the elements (15) of the listing (2) of the program (3) being able to be shown in a first partial area (11) of a graphical display means (14) and the signals (4, 5) in a second partial area (12) of the display means (14).
- 20 2. System in accordance with Claim 1, characterized in that there is provision for a marking (20) an element (15) of the listing (2) of the program (3) in the first partial area (11) of the graphical display means (14) and for a marking (21) of
- 25 the signals (4, 5) combined with this element (15) in the second partial area (12) of the display means (14).
3. System in accordance with Claim 1 or 2, characterized in that a third partial area (13) of the graphical display means (14)
- 30 is provided for presentation of at least a part of the signals (4, 5).

4. System in accordance with one of the previous claims, characterized in that the circuit (6) with the processor (7), the program memory (8) and the application-specific hardware components (9) are described in a hardware description language.
5. System in accordance with one of the previous claims, characterized in that means are provided for adapting the system to different processor types.
6. Method for combining and presenting signals (4, 5) of a hardware simulation device (1) and elements (15) of a listing (2) of a program (3),
- with the hardware simulation device (1) simulating the behavior of a circuit (6) with a processor (7), a program memory (8) which contains the program code (9) of the program (3), and application-specific hardware components (10), and creating signals (4, 5) as the result of the simulation,
  - with the elements (15) of the listing (2) of the program (3) being combined with the signals (4, 5) created during the simulated execution of the program code (9) contained in the program memory (8) corresponding to these elements (15),
  - with the elements (15) of the listing (2) of the program (3) being able to be represented in a first partial area (11) of a graphical display means (14) and the signals (4, 5) in a second partial area (12) of the display means.
7. Method in accordance with claim 6, characterized in that an element (15) of the listing (2) of the program (3) is marked in the first partial area (11) of the graphical display means (14) and the signals (4, 5) combined with this element (15) are

marked in the second partial area (12) of the display means (14).

8. Method in accordance with claim 6 or 7,  
characterized in that

5 at least a part of the signals (4, 5) is shown in a third  
partial area (13) of the graphical display means (14).

9. Method in accordance with one of the Claims 6 to 8,  
characterized in that  
the circuit (6) with the processor (7), the program memory (8)  
10 and the application-specific hardware components (9) are  
described in a hardware description language.

10. Method in accordance with one of the Claims 6 to 9,  
characterized in that  
the method is adapted to different processor types.

15 11. Error locating tool for combining and representing signals  
(4, 5) of a hardware simulation device (1) and elements (15) of  
a listing (2) of a program (3),

- with the hardware simulation device (1) simulating the  
behavior of a circuit (6) with a processor (7), a program  
20 memory (8) which contains the program code (9) of the  
program (3), and application-specific hardware components  
(10), and creating signals (4, 5) as the result of the  
simulation,
- with the error locating tool featuring means for combining  
25 the elements (15) of the listing (2) of the program (3)  
with the signals (4, 5) created during the simulated  
execution of the program code (9) contained in the program  
memory (8) corresponding to these elements (15), with the  
elements (15) of the listing (2) of the program (3) being  
30 able to be represented in a first partial area (11) of a  
graphical display means (14) and the signals (4, 5) in a

second partial area (12) of the display means (14).